APPENDIX C

FINAL FRAMEWORK FOR UNIFIED WATERSHED ASSESSMENTS, RESTORATION PRIORITIES, AND RESTORATION ACTION STRATEGIES

June 9, 1998

Framework for Unified Watershed Assessment, Restoration Priorities, and Restoration Action Strategies

CONTENTS

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The *Clean Water Action Plan* charts a course toward fulfilling the original goals of the Clean Water Act -- fishable, swimmable and safe waters for all Americans. The *Action Plan* presents a broad vision of watershed protection -- in which protections for America's coastal and estuarine waters, surface freshwater, wetlands, groundwater, and natural resources are integrated with traditional clean water and human health objectives.

A key element of the *Action Plan* is a cooperative approach to restoring and protecting water quality in which state, federal, tribal, and local governments work with stakeholders and interested citizens to (1) identify watersheds not meeting clean water and other natural resource goals and (2) work cooperatively to focus resources and implement effective strategies to solve these problems. This *unified watershed assessment* brings together, on a watershed basis, diverse objectives in assessments currently being conducted by states, tribes, federal agencies, and others. The *Action Plan* calls for state environmental agency leaders and state conservationists to jointly convene the process and to involve a full range of appropriate parties.

Several principles guide the development of *unified watershed assessments, restoration priorities, and restoration action strategies:*

- all components of a watershed related to aquatic systems are considered, including biological, physical, and chemical characteristics;
- human health and ecosystems are protected from significant sources of water pollution, and stewardship of natural resources is enhanced;
- *unified watershed assessments* are good opportunities to encourage creativity and innovation in assessing watershed condition and threats;
- States, tribes and federal agencies work together to assure that completed assessments have core comparable elements to promote comparable results regionally and nationally;

-- ongoing programs, current data and existing efforts and mechanisms are appropriate starting points for unified watershed assessments and priority setting; and

-- State environmental agency leaders and USDA's Natural Resources Conservation Service (NRCS) state conservationists jointly convene the process on non-tribal lands and work cooperatively with federal, interstate, and local agencies, conservation districts/land conservation departments, watershed-based organizations, and the public (tribal governments lead the process on tribal lands).

The key actions relating to unified watershed assessments, watershed restoration priority setting and watershed restoration action strategies are summarized below.

Unified Watershed Assessments:

State and tribes identify, *by October 1998,*--

-- watersheds needing restoration (i.e., those not meeting clean water and other natural resource goals);

-- watersheds needing preventive action to sustain water quality and aquatic ecosystems; and

-- pristine or sensitive watersheds on federal lands needing an extra measure of protection.

Watershed Restoration Priority Setting:

States and tribes, working with federal agencies and others, define *watershed restoration priorities, by October 1998.* Core elements of these priorities include--

-- identifying the highest priority watersheds requiring restoration to be addressed beginning in the 1999-2000 period;

-- coordinating with existing restoration priorities, but not limited to those established by the section 303(d) total maximum daily load process of the Clean Water Act; and

-- developing a preliminary schedule for the long-term efforts to restore the watersheds in need of restoration.

Beginning in FY 1999, states and tribal governments, working with federal agencies and others develop and implement *watershed restoration action strategies* to restore the health of those watersheds most in need of attention. Most of the new federal resources proposed for FY 1999 are targeted to watersheds in most need of restoration, including implementation of actions in *watershed restoration action strategies*. In those watersheds where prevention or additional monitoring is needed or for pristine or sensitive watersheds on federal, state, or tribal lands, base program funding can be prioritized to address these needs.

I. BENEFITS OF A WATERSHED APPROACH AND UNIFIED ASSESSMENTS

The *Clean Water Action Plan* illustrates how a watershed approach can focus resources to promote restoration and protect the chemical, physical, and biological integrity of America's water resources. The watershed approach provides a framework for states and tribes to focus fiscal and professional resources strategically on common priorities, to gain the maximum water quality and natural resource benefit for each dollar expended. Using a watershed approach, the diverse assessments conducted by states, tribes, federal agencies, and others can be brought together on a watershed basis. The *unified watershed assessment* process presented in the *Action Plan* provides a unique opportunity for these agencies/tribes to integrate these multiple assessment processes and to determine common priorities for watershed restoration and protection.

Unifying the existing watershed assessment efforts for state/tribal and federal lands has several significant benefits. For example, *unified watershed assessments* can help --

- focus and coordinate diverse assessment processes for water quality, watersheds, sources of drinking water, rangeland and forest ecosystem health, coastal and estuarine ecosystems, surface freshwater, wetlands, and groundwater, etc., to achieve greater efficiency and equity and a more robust evaluation of overall watershed condition and potential threats across America;

- make assessment results more understandable to the public and interested groups and improve accountability and availability of information to the public;

- highlight geographic areas where multiple problems exist (e.g., chemical water pollution, sediment contamination, wetland and habitat loss, impacts on living resources, threats to drinking water) and help assure that response actions are tailored to provide effective solutions to water related problems;

- identify cross-watershed pollution issues, including pollution transported downstream and deposition of air pollutants;

- catalyze state/interstate/tribal efforts to assess watershed and groundwater resources;

- provide a basis to link state/tribal, and federal programs with common objectives and priorities for watershed restoration and protection;

- consolidate and consider watershed information from federal, state/interstate/tribal programs as well as private organizations; and

- involve the public, local interest groups, and non-traditional organizations in the process.

II. UNIFIED WATERSHED ASSESSMENTS

The Action (p. 77, *Clean Water Action Plan*)

> ***"States [and tribes] should work with other appropriate agencies, governments, organizations, and the public to create Unified Watershed Assessments that identify watersheds that do not meet clean water and other natural resource goals and where prevention action is needed to sustain water quality and aquatic resources. Federal agencies will ask [Natural Resources Conservation Service (NRCS)] state conservationists and state environmental agency leaders to jointly convene this process and to involve a full range of appropriate parties."***

A) Existing Assessment Efforts

Unified watershed assessments are developed through a cooperative integration of existing assessment reports and processes, using existing and appropriate data and information. For example, states have recently established lists of impaired waters requiring total maximum daily loads under the Clean Water Act, and state technical committees have recently used a locally-led conservation process to identify priority areas for agricultural conservation programs. These waters and priority watersheds can be overlaid on maps and compared with each other and with other state, tribal or federal priority areas to generate *unified watershed assessments*. There are many existing state, interstate, tribal, and federal assessment activities currently underway, which may be appropriate starting points for developing *unified watershed assessments* (Appendix A).

B) Geographic Scope and Scale

Watersheds are evaluated and assessed at different geographic scales, ranging from watersheds around a relatively small waterbody (e.g., a lake, stream, small bay, or wetland) to a large geographic area (e.g., the 2149 watersheds defined by the U.S. Geological Survey as "8-digit hydrologic units") or, in some cases, to even larger areas such as the Chesapeake Bay drainage. While varying scales are often appropriate for highly localized or state-wide analyses, a more consistent approach is needed for multi-state and national objectives. See Appendix B for a map depicting the 8-digit hydrologic units defined by USGS.

States/interstates/tribes make assessments for watersheds at multiple scales for the purposes of assessing conditions and identifying priorities. For *unified watershed assessments*, the USGS 8-digit hydrologic unit scale serves as the common scale for reporting the results of watershed assessments and to help target resources. The condition of these 8-digit watersheds might be determined, either directly or by aggregating assessments of smaller watersheds. States/interstates/tribes may also want to identify smaller watersheds at scales that fall inside, or "nest" within, larger watersheds or basins to help target activities identified in the *watershed restoration action strategies*.

C) Unified Watershed Assessment Categories

Unified watershed assessments characterize the condition of waters within a watershed and the overall health of the aquatic system in watersheds, using the following general framework –

- **Category I – Watersheds in Need of Restoration.** These watersheds do not now meet, or face imminent threat of not meeting, clean water and other natural resource goals. Selection factors include–
  - nonattainment of national clean water goals (including exceedances of state or tribal water quality standards, or impaired drinking water sources, etc.);
  - nonattainment of natural resource goals related to aquatic systems, including goals related to habitat, ecosystem health, and living resources;
  - other appropriate measures and indicators of degraded aquatic system conditions (e.g., wetland condition and current and historical loss rates, percent impervious surface, and other measures of aquatic habitat); and
  - decline in the condition of living and natural resources that are part of the aquatic system in the watershed (e.g., decline in the populations of rare

and endangered aquatic species, decline in healthy populations of fish and shellfish, etc.)

Identification of watersheds in need of restoration is especially important because the *Clean Water Action Plan* provides that most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative be targeted to these Category I watersheds. Where prevention or additional monitoring is needed or for pristine or sensitive watersheds on federal, state, or tribal lands (Categories II, III and IV), base program funding may be prioritized to address these needs.

- **Category II – Watersheds Meeting Goals, Including Those Needing Action to Sustain Water Quality.** These watersheds meet clean water and other natural resource goals and standards and support healthy aquatic systems. All such watersheds need the continuing implementation of core clean water and natural resource programs to maintain water quality and conserve natural resources. Selection factors include–

  - meeting national clean water goals (including state or tribal water quality standards, drinking water protection objectives, etc.);

  - meeting natural resource goals, including goals related to aquatic habitat, ecosystem health, living resources; and

  - other measures and indicators of aquatic system conditions, including the condition of living and natural resources.

- **Category III – Watersheds with Pristine/Sensitive Aquatic System Conditions on Lands Administered by Federal, State, or Tribal Governments.** States/tribes work cooperatively with federal land managers to identify watersheds with exceptionally pristine water quality, other sensitive aquatic system conditions, and drinking water sources that are located on lands administered by federal, state, or tribal governments. These areas include currently designated and potential candidate Wilderness Areas, Outstanding Natural Resource Waters, and Wild and Scenic Rivers.

- **Category IV – Watersheds With Insufficient Data to Make an Assessment.** These watersheds lack significant information, critical data elements, or the data density needed to make a reasonable assessment at this time.

Within the four categories described above, states/tribes can develop additional subcategories that reflect the varying degree of condition. For example, additional subcategories could recognize –

- the degree of vulnerability or threat to water quality conditions, drinking water sources or aquatic ecosystems at;

- the degree to which water quality problems or threats are associated with sources that are located upwind from the watershed being assessed; or

- the degree to which upstream watersheds significantly affect downstream watersheds, which could be important in establishing restoration ranking priorities.

D) Assessment Criteria

Evaluating watershed condition or threats requires making professional judgements about the relative significance and importance of data, or the lack thereof. States/tribes make assessments using observed data, specific quantitative models, or more general qualitative methods for assessing watersheds, or some combination.

Among the most critical judgements to be made in the assessment process is defining the point at which an aggregation of data about a limited number of waters within a watershed result in the classification of an entire watershed as a Category I, II, or III watershed. State, tribal, federal, and interstate water program staff work cooperatively to address this topic early in the watershed assessment process and to define appropriate criteria up front. Several factors are important in this judgement, including --

- the number of pollutants exceeding state or tribal water quality standards for the waterbody, impairing sources of drinking water, or contributing to nonattainment of natural resource goals related to aquatic systems;

- the degree or severity of exceedances or impairments;

- the duration of exceedances or impairments; and

- the spatial extent of the exceedances or impairments.

In most cases, judgements can be made reasonably if more than about a fifth or a quarter of the waters or other natural resources of the watershed are assessed. As a general guide, Category I watersheds are any 8-digit watershed in which reasonably current information shows nonattainment of clean water or other natural resource goals in more than about 15% - 25% of the assessed waters or natural resource components of the watershed. Where pollutants substantially exceed safe levels or where water quality or other natural resource problems are especially severe, watersheds with a smaller percentage of assessed waters or components not meeting goals may be considered impaired.

E) Other Assessment Considerations

Some additional considerations related to watershed assessments are identified below--

- **Existing Regional and Watershed Initiatives** -- In many parts of the country there are active, diverse partnerships of watershed stakeholders involved in watershed projects. In many instances, these partnerships have developed significant databases on watershed conditions, which can be very helpful in developing *unified watershed assessments*. Conservation districts and land conservation departments, for example, are involved in a vast number of watershed projects across the country, many of which involve monitoring. The active participation of these partnerships and organizations can help advance the assessment process.

- **Coastal Waters** -- In coastal watersheds, state coastal management agencies, National Oceanic and Atmospheric Administration, great waters programs such as the Chesapeake Bay, Great Lakes and Gulf of Mexico, national estuarine research reserves, marine sanctuaries and national estuary programs have additional information and technical expertise, and can serve an important role in the assessment process.. For example, 17 out of the 28 national estuary programs have completed comprehensive conservation and management plans (CCMPs), which characterize pollution and degradation problems in their watersheds and present action plans for restoration. These CCMPs are approved by the State Governors and the EPA Administrator.

- **Source Water For Drinking Water Supplies** -- Where watersheds are designated in part, as drinking water source assessment or protection areas, states and some tribes are preparing to undertake drinking water source assessments. In these assessments, states identify specific protection areas, sources of potential pollution, and priorities for prevention or restoration activities. Information and technical expertise may already be available in certain areas of the state from these assessments; in turn, the *unified watershed assessments* can provide information of use in source water assessments.

- **Interstate Watersheds** -- States that share a watershed are encouraged to work together to reach common methods, assessment goals, definitions, and outcomes; data sets; and assessment processes and schedules. Information exchange, especially via geographic information systems, can help facilitate assessments and solutions. Interstate agencies, such as river basin commissions, can be especially helpful in providing information and reaching agreements in the assessment process.

-- **Watersheds Crossing Tribal or International Boundaries** -- States take the lead for watersheds or portions of the watersheds on non-tribal lands, and the tribes take the lead for watersheds or portions of watersheds on tribal lands. A major goal of the *Clean Water Action Plan* is to foster cooperation and coordination of watershed efforts to improve overall watershed health and water quality. While the *Action Plan* does not mandate such cooperation, government agencies at all levels are encouraged to identify opportunities for increased cooperation, coordinated resource management, and partnership building.

Tribes/states which share a watershed are encouraged to reach common and consistent assessment procedures, goals, and objectives and exchange information in a manner similar to interstate watersheds. In many cases there is an existing organization (e.g., interstate or international commission) or mechanism (e.g., memorandum of agreement) that can be used to assess and manage lands and water resources. State/tribal and federal governments may want to consider the early identification of such opportunities.

F) Data and Tools

The *Clean Water Action Plan* recognizes that assessment processes will need to vary across the nation; the information and tools to be used in the assessment process are left to the discretion of each state and tribe. Making an informed judgement about the condition of aquatic systems on a watershed basis requires an evaluation of data about conditions of water quality, flow, healthy/sustainable populations of fish and wildlife, beneficial uses, aquatic habitat, and the management of natural resources within the watershed. Over the past several years, state, tribal, federal, interstate agencies and local watershed councils have developed a range of environmental data and information systems that present information on a watershed basis which can greatly assist this evaluation. Also, federal, state, interstate, and tribal and agencies have developed protocols that identify the key data and information needed to assess watershed condition and health.

Many easily accessible information and assessment tools are listed in Appendix C. The *Clean Water Action Plan* Internet websites, listed below, have links to many of the sources of information listed in Appendix C. These sites can be accessed at:

<http://www.epa.gov/cleanwater/links.html> or
<http://www.nhq.nrcs.usda.gov/cleanwater/links.html>

G) Roles and Responsibilities

Unified watershed assessments may pose organizational and intergovernmental opportunities and challenges. For example, in some parts of the country, watershed conditions

are to be characterized for the first time. For this reason and given the complexity of the overall assessment process, it is important that all interested parties approach the process constructively and cooperatively, and maintain regular and open communication.

-- **States Take the Lead** -- State environmental agency leaders and NRCS state conservationists jointly convene a process, involving all appropriate parties, for developing the *unified watershed assessments* in the state. A variety of state agencies may want, and need to be, involved in the process. These state agencies may include those for water quality, drinking and ground water protection, coastal management, agriculture, conservation, fish and wildlife, forestry, rangeland, natural resources, parks, recreation, mining, geology, and transportation, public health, etc. Appropriate federal agencies, too, may want and need to be involved in the process, especially federal land and resource management agencies.

To initiate the assessment process, state environmental agency officials and the NRCS state conservationists are encouraged to meet as soon as possible with regional representatives of appropriate federal agencies to discuss the general approach to watershed assessment and to define an organizational plan for *unified watershed assessments* in the state.

– **Tribal Governments Take the Lead** -- Tribal governments take the lead in developing the assessments for watersheds or portions of watersheds in Indian Country and other tribal lands taking advantage whenever possible of existing coordination mechanisms with federal, international, state, and interstate agencies.

– **Federal Agencies and Federal Lands** -- States work closely with appropriate federal agencies in developing watershed assessments. Such agencies include, for example, EPA, NRCS, US Geological Survey, US Army Corps of Engineers, US Fish and Wildlife Service, the National Park Service, Department of Defense, National Oceanic and Atmospheric Administration, US Forest Service, Bureau of Land Management, and Bureau of Reclamation.

For watersheds that are entirely or predominantly made up of lands administered by the federal government, the responsible federal land and resource management agencies may want, and need to be, involved in the assessment process. In these watersheds, the responsible federal agency may take the lead in the assessment process, in close cooperation with the state. Federal land and resource management agencies have valuable information, technical expertise, and tools to conduct assessments of watershed health.

The federal government has a trust obligation to American Indians which is defined by statute, treaties, Executive Orders and court cases, and as such, has an affirmative duty to protect the lands and natural resources of American Indians.

The trust obligation requires that federal agencies consult with tribes on a government-to-government basis. Tribal governments will work closely with appropriate federal agencies on a government-to-government basis in developing watershed assessments for tribal lands.

- **Local Governments and Conservation Districts/Land Conservation Departments** -- States work with local governments and soil and water conservation districts/land conservation departments in the watershed assessment process, by involving representatives of local governments and conservation districts/land conservation departments in assessments and priority setting, and facilitating local government and conservation district participation in public review processes.

- **Local Lake, River, Watershed and Land Non-Government Organizations** -- States work with local lake, river, watershed and land conservation organizations in the watershed assessment process by involving representatives of these organizations in assessments and priority setting.

- **Public Utilities** -- In many cases drinking water or wastewater utilities have information and expertise to add to the process. Some of the monitoring they conduct may be useful to the assessments, particularly of ambient conditions. In addition, by fall 1999, public water systems will make public their first consumer confidence reports describing drinking water sources and quality to the public, and therefore past trend data may be available now.

- **The Public** -- States inform the public of the watershed assessment process and provide for public review and comment on the draft assessment and the identification of watersheds needing attention in the 1999-2000 period. Direct public involvement in watershed assessment, through volunteer monitoring programs, is an important component of the public's participation process, in addition to review and comment.

III. DEFINING WATERSHED RESTORATION PRIORITIES

The Action (p. 78, *Clean Water Action Plan*)

> ***" States and tribes working with appropriate agencies, organizations, and the public define watershed restoration priorities, with special attention to watersheds most in need of restoration and protection through the year 2000. This schedule must be coordinated with section 303(d) of the Clean Water Act and provide an opportunity to bundle Total Maximum Daily Loads on a watershed scale."***

The *Clean Water Action Plan* calls for states and tribes to work with appropriate agencies, organizations, and the public to identify the Category I watersheds most in need of restoration beginning in the FY 1999-2000 period.

The development of *watershed restoration priorities* needs to be coordinated with other priority setting mechanisms, including --

- -- schedules for total maximum daily loads (TMDLs) under the Clean Water Act;
- -- priority watersheds under USDA's environmental quality incentives program (EQIP),
- -- the state nonpoint source programs;
- -- the national estuary programs;
- -- state coastal nonpoint programs;
- -- state and local source water assessment and protection programs;
- -- the interagency abandoned mine land programs management initiative;
- -- protection and restoration of tribal trust resources; and
- -- other related programs and priorities.

The *unified watershed assessment* process provides the foundation for setting *watershed restoration priorities*. Many existing priority-setting mechanisms may prove valuable in establishing priorities, including locally led conservation efforts by state technical committees; state and tribal processes for establishing priority rankings of impaired waterbodies under the Clean Water Act; national estuary programs; etc. In identifying *restoration priorities*, states and tribes:

- -- examine specific Category I watersheds and identify those most in need of restoration beginning in the 1999-2000 period;
- -- develop a preliminary long-term schedule for attention to all remaining Category I watersheds;
- -- consider existing restoration priorities and schedules;
- -- consider economic and social factors including environmental justice;

- involve diverse interstate, state/tribal agencies (e.g., water quality, drinking and ground water, coastal zone management, agriculture, conservation, forestry, natural resources, wildlife and fisheries, transportation); and

- involve local governments, conservation districts/land conservation departments, public utilities, non-government organizations, and the public.

At the state/tribal level, the unified assessments and the restoration priorities will guide the development of *restoration action strategies* in 1999 and steer the use of most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative to accelerate watershed restoration in a coordinated manner to implement these strategies. Existing federal authorities and programs also can make contributions to improving watershed health. At the national level, the information will be used to demonstrate that the nation has a coordinated strategy and can effectively use most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative to help achieve clean water and other natural resource goals.

IV. WATERSHED RESTORATION ACTION STRATEGIES

The Action (p. 80, *Clean Water Action Plan*)

> ***"States and tribes should work with public agencies and private-sector organizations and citizens to develop, based on the initial schedule for the first two years, Watershed Restoration Action Strategies, for watersheds most in need of restoration."***

The *Clean Water Action Plan* calls for states and tribes to develop *watershed restoration action strategies* for those watersheds most in need of restoration, in cooperation with federal, interstate, and local agencies, watershed-based organizations, and the public. The *Action Plan* provides that most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative be targeted to restoration of those watersheds identified as not meeting clean water and other natural resource goals (Category I watersheds) and identified as *restoration priorities* by states and tribes for the 1999-2000 period. Beginning in Fall 1998, most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative will be directed to those activities identified in the *watershed restoration action strategies* which provide measurable improvement in water quality.

Watershed restoration action strategies for each watershed might include elements such as --

- identification of measurable environmental and programmatic goals;

- identification of sources of water pollution and the relative contribution of sources;

- implementation of pollution control and natural resource restoration measures (e.g., permit revisions, implementation of best management practices and buffer strips) to achieve clean water and other natural resource goals, especially those measures which will achieve multiple environmental and public health benefits;

- schedules for implementation of needed restoration measures and identification of appropriate lead agencies to oversee implementation, maintenance, monitoring, and evaluation;

- implementation of total maximum daily loads (TMDLs) for pollutants exceeding state water quality standards;

- implementation of source water assessment and protection programs;

- needed monitoring and evaluation to assess progress towards achieving environmental and programmatic goals;

- funding plans to support the implementation and maintenance of needed restoration measures;

- a process for cross-agency (federal, state, interstate, tribal, and local) coordination to help implement *watershed restoration action strategies; and*

- a process for public involvement.

Federal agencies work with states/tribal partners to ensure a more coordinated approach to restoration and protection of watersheds, but federal agencies will not be called upon to approve *watershed restoration action strategies* developed by the states and tribes. Based upon the assessments, specific *watershed restoration action strategies* focus on the appropriate portions of the priority watersheds, in order to achieve the identified watershed goals.

States, federal, and tribal agencies have developed or embraced a wide variety of comprehensive restoration plans for many watersheds. Examples include comprehensive conservation and management plans adopted by national estuary programs, state-recognized wellhead protection areas and sole source aquifers, among many others. Where an existing plan meets the goals of the *Clean Water Action Plan*, the existing restoration plan could be a Watershed Restoration Action Strategy. This is also an opportunity to review existing plans for priority watersheds to assure they meet *Clean Water Action Plan* goals

V. PRODUCTS, SCHEDULE AND FUNDING

A) Products and Schedule in 1998

The *unified watershed assessments* and *watershed restoration action strategies* lay the ground work for improving information transfer and a new, cooperative process to restore and protect water quality on a watershed basis. Thoughtful coordination of existing processes can result in sound and useful *unified watershed assessments* and *watershed restoration action strategies*. At the same time, new working arrangements are needed, unanticipated problems are likely, and the time available is short. The assessments and priorities developed in 1998 as a result of this process may be preliminary, and may need to be refined as restoration efforts go forward in future years.

States/tribes work to make draft *unified watershed assessments* and draft *restoration priorities* available for federal and public review by **August 1, 1998** or earlier. Public review can be expedited by use of the Internet in addition to normal notice mechanisms.

Federal agencies comment directly to the state/tribe, paying particular attention to the identification of watersheds most in need of restoration for the 1999-2000 period. In commenting on draft *unified watershed assessments* and draft *restoration priorities*, federal program managers evaluate the degree to which the assessment process is consistent with this Framework. States/tribes consider these comments and work cooperatively with federal, interstate, and local agencies, watershed-based organizations, and the public to develop final *unified watershed assessments* and *restoration priorities* by **October 1, 1998.**

The *unified watershed assessments* are envisioned to consist of a list or map of all watersheds within state or tribal boundaries aggregated to the 8-digit hydrologic unit (each denoted as Category I, II, III, or IV); accompanied by a one- or two-page description of the processes, participants, rationale, and information used to make the determinations.

The *watershed restoration priorities* are envisioned to consist of three elements:

- an identification of specific Category I watersheds most in need of restoration, beginning in 1999 - 2000;
- a preliminary long-term schedule for attention to all remaining Category I watersheds; and
- a two- or three-page description of the processes, participants, rationale, and information used to make priority decisions.

In addition, states or tribes are encouraged to identify priorities for Category II, III and IV watersheds, to help focus protection and monitoring programs as well as base funding resources.

The August 1, 1998 draft and October 1, 1998 final *unified watershed assessments* and list of *restoration priorities* need to be distributed to agencies and stakeholders within the state, with an additional copy to: The Unified Watershed Assessment Working Group (4503F), Washington, DC 20460.

B) Funding Watershed Assessments in FY 1998

Many states and tribes have made or are making a substantial investment in expanded monitoring and watershed assessment and are able to integrate the unified watershed assessment process into these continuing efforts. Some states/tribes, however, may need to shift FY 1998 grant fund commitments to provide adequate funding to complete *unified watershed assessments* and *restoration priorities*. Subject to the approval of the responsible EPA regional office, state and tribal environmental agencies may use FY 1998 state grant monies under the Clean Water Act for developing *unified watershed assessments* and *restoration priorities*, including water quality planning set-asides under section 604(b), nonpoint source grants under section 319, and water program grants under section 106. Environmental Performance Partnership Agreements also provide a good opportunity for flexibility.

C) FY 1999 Funding Guidance

As outlined in the *Clean Water Action Plan*, federal agencies will provide guidance on the use of most new resources made available through the President's FY 1999 Clean Water and Watershed Restoration Budget Initiative (above FY 1998 base levels) for implementation of *watershed restoration action strategies* in Category I watersheds identified by states/tribes as priorities for restoration. Beginning in Fall 1998, priority for these new resources will be given to those activities identified in the *watershed restoration action strategies* which provide measurable improvement in water quality. Some existing base program funding may also be re-prioritized as well to help meet these restoration needs.

In those watersheds where prevention or additional monitoring is needed or for pristine or sensitive watersheds on federal, state, or tribal lands (Categories II , III, and IV), base program funding can also be re-prioritized to address these prevention or monitoring needs.

Federal agencies will develop guidance on targeting expanded funding for FY 1999, including --

-- grants to states/tribes for implementation of measures to control nonpoint pollution under section 319 of the Clean Water Act;

-- grants to states/tribes for general water program management under section 106 of the Clean Water Act;

-- grants to coastal states for coastal zone management under sections 309 and 6217 of the Coastal Zone Management Act;

-- funding under USDA's environmental quality incentives program (EQIP);

-- funds available to the US Forest Service, the US Bureau of Land Management, and the US Bureau of Reclamation under the Clean Water and Watershed Restoration Budget Initiative;

-- funds available to the US Fish and Wildlife Service through the Partners for Fish and Wildlife program for wetland habitat restoration projects on private land;

-- funds available to the US Bureau of Indian Affairs under the Clean Water and Watershed Restoration Budget Initiative; and

-- funds available to the US Army Corps of Engineers for water quality and related projects under the Clean Water and Watershed Restoration Budget Initiative.

VI. NATIONAL REPORT

Restoration and protection of healthy aquatic systems in watersheds around the country are long-term goals. The actions called for in the *Clean Water Action Plan*, including the initial *unified watershed assessment* and the development of *watershed restoration action strategies* for the FY 1999-2000 period, are first steps toward these goals.

At the end of the first phase of the effort (i.e. at the end of the year 2000), the *Clean Water Action Plan* calls for federal agencies to work with states, tribal governments and other interested parties to develop a national report to the President, Governors, tribal leaders, and the public. This report will review progress of efforts to both protect and restore watershed conditions over the past two years, including progress in implementing watershed restoration action strategies. In addition, the report will make recommendations for appropriate next steps in watershed restoration efforts, including any changes in existing approaches.

APPENDIX A

EXAMPLES OF EXISTING ASSESSMENT PROCESSES THAT MAY BE USEFUL IN DEVELOPING UNIFIED WATERSHED ASSESSMENTS

The *Clean Water Action Plan* describes a variety of existing processes and sources of information that are currently used by states, interstate commissions, tribes, and federal agencies to assess water quality and other natural resource conditions. In 1998, *unified watershed assessments* begin by using and integrating these assessments in a cooperative process, utilizing existing data and information. On pages 75-76, the *Action Plan* presents the following examples of existing processes that may be appropriate starting points for developing *unified watershed assessments.*

State and Tribal Assessments

States, interstate commissions, and tribes monitor water quality and identify waters and watersheds not meeting clean water goals in several ways:

-- Under section 305(b) of the Clean Water Act, collecting water quality information and reporting on the condition of waters every two years.

-- Under section 303(d) of the Act, using monitoring and other water quality information to develop lists of waters not meeting clean water goals and needing response actions to restore water quality. New lists of problem waters and schedules for implementation plans for listed waters by April 1998 are under development.

-- Under section 319 of the Act, identifying water bodies that are impaired by nonpoint sources of pollution.

-- Under section 320 of the Act, collecting, characterizing and assessing data on toxics, nutrients, and natural resources to identify problems and develop action plans to restore and protect estuaries of national significance. There are currently 28 estuaries in the country designated as national estuary programs.

-- Working with EPA and other federal agencies to organize diverse information concerning watershed health, such as data on wetland loss, sediment contamination, discharge permit violations, and related factors, and to present this information for each of the over 2,000 watersheds in the country.

-- Conducting assessments of drinking water source waters required by the Safe Drinking Water Act. State plans to conduct their drinking water source assessments are due to EPA no later than February 1999; the assessments must be completed no later than 2003. These

assessments will delineate the boundaries of the area providing source water and identify, to the extent practical, the origins of contaminants in that area to determine the susceptibility of a water system to such contaminants in order to provide for the protection and benefit of public water systems. These assessments form the basis for actions to protect sources of drinking water.

-- Developing project priority systems for clean water and drinking water state revolving loan funds.

-- With federal agencies, conducting flood plain studies and developing appropriate plans.

-- Identifying coastal water quality problem areas as part of efforts to reduce polluted runoff to coastal waters.

-- Developing assessments of wetland areas that need special attention or protection.

Federal Agency Assessments

Federal agencies also use a diverse set of processes to identify watershed restoration and protection priorities for federal programs.

-- NRCS facilitates a locally led conservation process and State Technical Committees, made up of state and federal agencies and private organizations to recommend priorities for agricultural conservation programs to protect and restore water quality.

-- The US Forest Service, and the US Bureau of Land Management use a variety of watershed assessment processes to identify critical watersheds on public lands that need restoration and protection.

-- The US Fish and Wildlife Service uses an ecosystem approach to wetlands and other important resource protection, restoration, and conservation at the watershed level in developing strategic processes and partnerships on both public and private lands through the North American Waterfowl Management Plan, Partners for Fish and Wildlife Program, Fisheries Strategic Plan, recovery plans prepared under the Endangered Species Act, Partners in Flight and other initiatives.

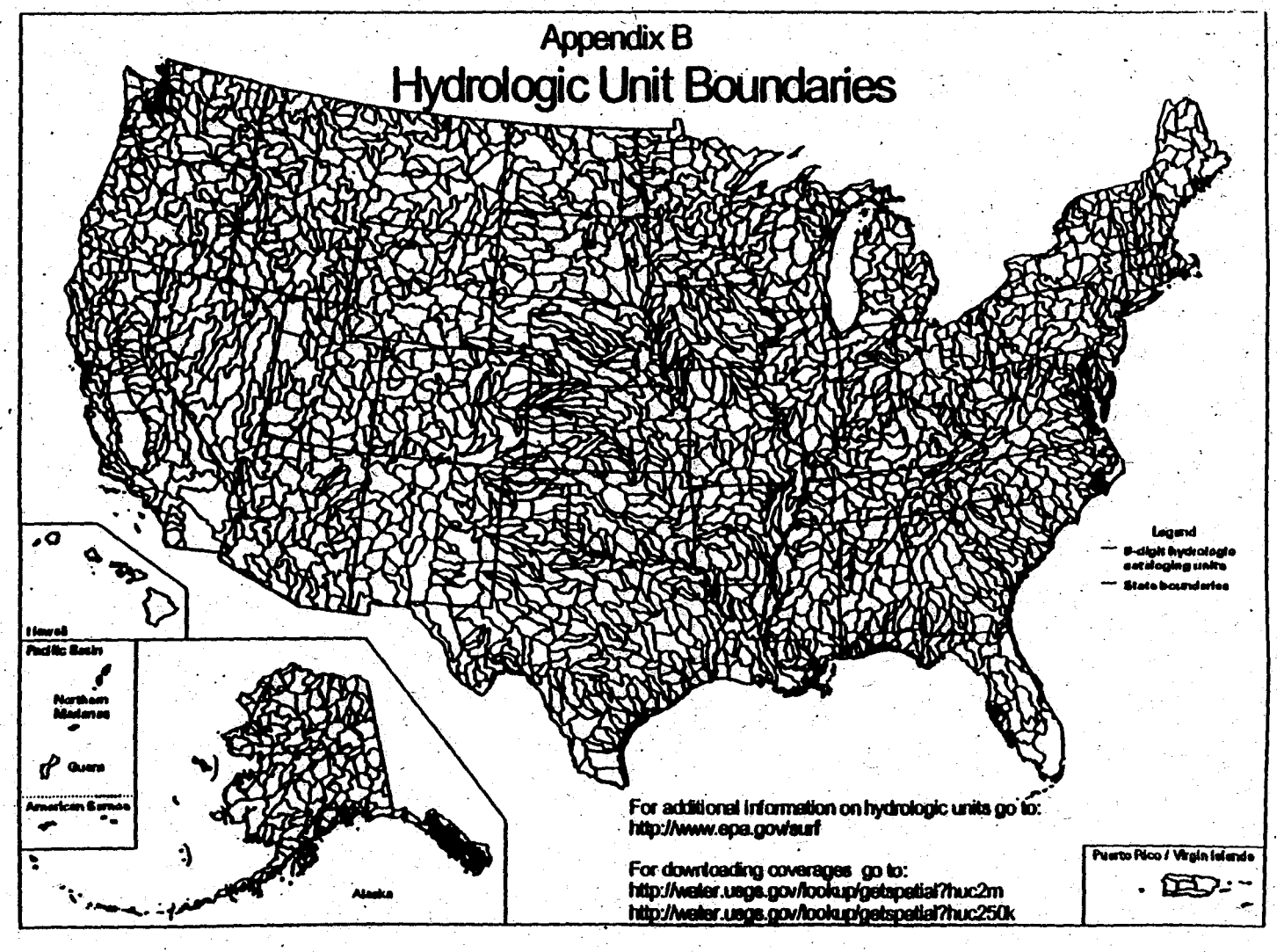
Federal agencies are working with states, tribes and others to address water resource issues in specific areas of the country. These federal efforts support state actions to assess and address critical areas. Areas where federal agencies are now working include --

-- the Chesapeake Bay;
-- the Colorado River Basin;
-- the Columbia River Basin;
-- the Everglades;

-- the Great Lakes;
-- the Gulf of Mexico;
-- Lake Tahoe;
-- the Northwest Forest Plan;
-- the San Francisco Bay Delta; and
-- the Southern Appalachian Assessment.

Appendix B

Hydrologic Unit Boundaries



For additional information on hydrologic units go to:
http://www.epa.gov/surf

For downloading coverages go to:
http://water.usgs.gov/lookup/getspatial?huc2m
http://water.usgs.gov/lookup/getspatial?huc250k

APPENDIX C

WATERSHED ASSESSMENT – DATA AND TOOLS

The *Clean Water Action Plan* recognizes that assessment processes will need to vary across the nation; the information and tools to be used in the assessment process are left to the discretion of each state and tribe. Making an informed judgement about the condition of aquatic systems on a watershed basis requires an evaluation of data about conditions of water quality, flow, healthy/sustainable populations of fish and wildlife, beneficial uses, aquatic habitat, and the management of natural resources within the watershed. Over the past several years, state, tribal, federal, interstate agencies and local watershed councils have developed a range of environmental data and information systems that present information on a watershed basis which can greatly assist this evaluation. Also, state, tribal, federal, and interstate agencies have developed protocols that identify the key data and information needed to assess watershed condition and health.

The Association of State and Interstate Water Pollution Control Administrators website offers state related information and a "Hot Link" to all state water program websites. These sites can be accessed at: [http://www.asiwpca.org]. In addition, many easily accessible information and assessment tools, now available on the Clean Water Action Plan Internet website, have links to many of the sources of information listed below, plus others.

These sites can be accessed at:

[http://www.epa.gov/cleanwater/links.html] or
[http://www.nhq.nrcs.usda.gov/cleanwater/links.html] They include:

Abandoned Mine Lands: Effects on Water Quality Restoration Programs

Abandoned Mine Lands Inventory, US Department of Interior (USDOI) - Bureau of Land Management (BLM), Office of Surface Mining (OSM)
[http://www.osmre.gov/osm.htm]
This site links to 'Environmental Restoration' [http://www.osmre.gov/osmaml.htm], which provides access to the Abandoned Mine Lands Inventory System (AMLIS). AMLIS is an inventory of land and water impacted by past mining operations and provides the information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as information on the cost associated with the

reclamation of those problems. OSM Homepage also links to Annual State Oversight Reports (click on 'Environmental Protection'). These reports are compiled for each state program as part of the Office of Surface Mining oversight responsibility. The reports contain text, tables, and figures, and reports for 1997 are available for downloading in "pdf" file format.

Interagency Abandoned Mine Lands Initiative maps of metal-impaired stream reaches, USDOI - US Geological Survey (USGS)
[http://amli.usgs.gov/amli/]
The USGS is conducting an Abandoned Mine Lands (AML) Initiative during fiscal years 1997 through 2001 to provide technical assistance in support of federal Land Management Agency (FLMA) actions to remediate contamination associated with abandoned hardrock mining activities. This Initiative is part of a layer strategy by the Bureau of Land Management (BLM) and the US Forest Service (USFS) to coordinate activities for the cleanup of federal lands affected by AML. The strategy will employ a watershed approach, in which contaminated sites are identified and remediated based on their effect on the water and ecosystem quality of a targeted watershed. The Initiative will be implemented on a pilot scale in two watersheds, the Boulder River Basin in southwestern Montana and the Upper Animas River Basin in southwestern Colorado.

Agricultural Effects on Water Quality

Agriculture and Water Quality, US Department of Agriculture (USDA) - Economic Research Service
[http://www.econ.ag.gov/Briefing/wqbrief/]
Many water quality problems are the result of non-point source pollution from agriculture. This site analyzes the relationship between agriculture and water quality. It investigates the 'Physical Dimensions' of the relationship; sediment from soil erosion, nutrients from fertilizers and manure, pesticides, and salt from irrigation. This site includes maps and analysis of Groundwater Vulnerability Indexes for chemical loss from farm fields. This site also examines the 'Economic Dimension' of the relationship between agriculture and water quality, and provides access to USDA, EPA, and state programs and resources.

National Water Quality Assessment (NAWQA) Pesticide National Synthesis Project, USGS
[http://water.wr.usgs.gov/pnsp/anstrat/#hdr3]
The results from the first cycle of NAWQA water quality data collection during 1992-1996 include analysis of seventy-six pesticides and seven pesticide degradation products in about 8,500 samples of groundwater and surface water in twenty of the nation's major watersheds (NAWQA study units). These data are the most extensive ever collected for such a wide range of pesticides and locations. The seventy-six herbicides, insecticides,

and fungicides targeted in the study account for approximately seventy-five percent of agricultural pesticide use in the United States and a substantial portion of urban and suburban use. This site provides information on the pesticides analyzed and their use, chemical analysis and considerations for data interpretation, water quality criteria for the pesticides analyzed, and criteria for aquatic-life and human health.

Potential Priority Watersheds for Protection of Water Quality from Nonpoint Sources Related to Agriculture, USDA- Natural Resources Conservation Service (NRCS)
[http://www.nhq.nrcs.usda.gov/land/pubs/wqpost2.html]
This analysis provides national maps to assist decisionmakers in identifying priority watersheds for water quality protection from nonpoint sources related to agriculture. The basis for the analysis is 2,105 8-digit hydrologic units, or watersheds, in the 48 states (910,000 acres average size). Maps are available for download in GIF and Postscript format. Contact 202-690-0341.

Coastal and Ocean Resosurces

Coastal Assessment and Data Synthesis System, US Department of Commerce (USDOC), National Oceanic and Atmospheric Administration (NOAA)
This is a database and mapping system centered around a watershed-based spatial framework that defines hydrologic boundaries of the 138 major estuarine watersheds in the contiguous U.S. Contact 301-713-3000.

Essential Fish Habitat Designation in Fishery Management Plans, NOAA-National Marine Fisheries Service (NMFS)
[http://kingfish.ssp.nmfs.gov]
Fishery Management Councils, in cooperation the NMFS will amend Fishery Management Plans as required by the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act. The amendment process requires that Essential Fish Habitat (EFH) for all life history stages of managed species be identified and designated as such and that all potential threats to EFH be identified. The amendments will also identify measures to conserve and enhance EFH. This process also requires NMFS to consult with federal agencies on actions or proposed actions undertaken, authorized, or funded that may adversely affect EFH. Fishery Management Councils may consult as well and must consult if anadromous habitat is involved. Identification and designation of EFH is currently underway and narrative descriptions as well as maps of EFH should be available beginning in January 1999. Additional information can be attained through the Office of Habitat Conservation at the above web site, or contact 301-713-2325.

National Estuarine Eutrophication Survey, NOAA
[Web site due in summer 1998]
The National Estuarine Eutrophication Survey provides an assessment of the conditions and trends of eutrophication symptoms in 138 of our Nation's coastal water bodies based on information collected from 400 scientists. Contact 301-713-3000.

1995 National Shellfish Register of Classified Growing Waters, NOAA
[http://www-orca.nos.noaa.gov/projects/95register/]
The Register summarizes the status of growing-water classifications of the Nation's commercial shellfish resources (over 4,200 growing waters), and includes information on such factors as relative shellfish abundance, the basis for classification, the status of shellfish restoration efforts, the potential to upgrade harvest classification for each growing water and the types of pollution sources contributing to harvest limitation. Contact 301-713-3000.

The National Status and Trends Program (NS&T), NOAA
[http://www-orca.nos.noaa.gov/projects/nsandt/nsandt.html]
This program was initiated by NOAA to determine the status of, and to detect changes in the environmental quality of our Nation's estuarine and coastal waters. Contact 301-713-3028.

State of the Coast, NOAA
[http://state_of_coast.noaa.gov/]
Environmental pressures are far from evenly distributed. Our coastal systems carry the largest burden, and that burden is constantly increasing. NOAA's State of the Coast website provides current information on the use and preservation of coastal and ocean resources of the United States. This website includes fourteen essays with data and analysis concerning 'Pressures on Coastal Resources', the 'State of the Coast Environment', and 'Societal Response'. Of special interest regarding pollution indicators are "Chemical Contaminants in Oysters and Mussels" and "Coastal Monitoring." Contact 301-713-3028.

National and Regional Sources of Information and Analysis

A Conservation Assessment of the Freshwater Ecoregions of North America, World Wildlife Fund
World Wildlife Fund-US, with support from the EPA, has conducted a conservation assessment of freshwater ecoregions as an initial step in priority setting for conservation initiatives. The goals of this assessment are: (1) to identify freshwater ecoregions that support globally outstanding biological diversity and to emphasize our global responsibility to protect and restore them; (2) to assess the types and immediacy of

threats to North American ecoregions; (3) to identify specific sites within ecoregions where conservation activities may result in substantial benefits to biodiversity; (4) to identify important gaps in information that hamper an accurate evaluation of biodiversity; and (5) to provide a broad-scale framework so that conservation agencies and groups can position their activities within a continental and global context, resulting in more effective allocation of conservation resources. Contact 202-260-4905 or 202-861-8374.

Clean Lakes, EPA
[http://www.epa.gov/OWOW/lakes/lakes.html]
EPA's Clean Lakes homepage provides a gateway to a variety information on lakes and reservoirs. The site includes: links to the lakes chapter in the latest Water Quality Inventory Report required under Section 305(b) of the Clean Water Act (CWA); information on the CWA Section 314 Clean Lakes Program; a list of EPA documents on lake and reservoir management, including information on where to order these documents; complete copies of several lakes documents; and links to a variety of lakes organizations, including among others, the North American Lake Management Society at http://www.nalms.org/.

Index of Watershed Indicators (IWI), Environmental Protection Agency (EPA)
[http://www.epa.gov/surf/iwi/]
The Index of Watershed Indicators (IWI or Index) is the EPA's first national picture of watershed health. The Index organizes and presents aquatic resource information on a watershed basis (8-digit HUCs). Watersheds are those lands bounded by ridgelines that catch rain and snow, and drain to specific marshes, streams, rivers and lakes, or to groundwater. Watersheds are important because activities within them affect water quality. The IWI uses fifteen indicators, also referred to as "data layers". Seven of the indicators are related to the condition of the aquatic resources and eight are related to vulnerability. This site provides an overview of the Index, national maps, and watershed maps showing their index. The IWI Introduction [http://www.epa.gov/surf/iwi/intro.html] Contact 202-260-7046.

The Strategy for Improving Water-Quality Monitoring in the United States, Intergovernmental Task Force on Monitoring Water Quality
[http://h20.usgs.gov/public/wicp/Summary.html]
This report recommends a strategy for nationwide water-quality monitoring and technical monitoring improvements to support sound water-quality decision making at all levels of government and in the private sector. The report and its related appendices include techniques for setting goals; designing and tailoring flexible, comprehensible monitoring programs; encouraging and effectively utilizing institutional collaboration; implementing comparable methods, and improving assessment and reporting among other things. Implementation of the recommendations in the report will improve our ability to monitor, assess, and manage the Nation's water resources at all geographic scales. Contact 202-260-7046.

National Forest Land and Resource Management Plans, USDA - USFS
These plans allocate land managed by the national forests, specifies standards and guidelines, schedules, management activities and identifies monitoring and evaluation activities. Contact the individual forest supervisor's office of USDA's Forest Service for information about specific forest plans.

The National Resources Inventory (NRI), USDA - NRCS
[http://www.ftw.nrcs.usda.gov/nri_data.html]
The NRI is a statistically based sample of analyses of conditions and trends in land use and natural resources (including wetlands) on nonfederal lands. Information is available for 800,000 sample points for the years 1982, 1987 and 1992. Data for 1997 is currently being collected. The data collected by NRI is statistically reliable for national, regional, state and sub-state analysis. This site provides access to NRI data and trends, and links to State of the Land (USDA-NRCS). Contact 202-720-5420.

National Water Quality Assessment (NAWQA), USGS
[http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html]
NAWQA is designed to assess historical, current, and future water quality conditions in representative river basins and aquifers nationwide. Investigations will be conducted in 59 "study units" throughout the nation to provide consistent information for national and regional water quality assessment. This site includes national and regional maps of study units, and additional maps, data, and analysis for each specific study unit.

The National Sediment Inventory (NSI), EPA
[http://www.epa.gov/ost/cs/report.html]
[http://www.epa.gov/surf/iwi/dback04.html]
[http://www.epa.gov/surf/data/contam_sediments]
The NSI is a compilation of existing sediment quality data and a peer reviewed set of protocols used to evaluate the data, classify sampling stations, and identify watersheds which contain areas of probable concern for sediment contamination. The NSI currently contains approximately 2 million records from 20,000 sampling locations throughout the Nation, representing monitoring conducted during 1980-1993 and stored primarily in large Federal data repositories. The evaluation protocols include a weight of evidence tiered approach for classifying sampling stations based on sediment chemistry, associated fish tissue residue levels, and sediment toxicity test results. Areas of probable concern are identified by both the extent and severity of contamination within 8-digit USGS HUCs based on available information. The ongoing primary objective of the NSI is to compile all existing sediment quality data, and accurately assess the incidence, extent, severity, and sources of sediment contamination for a biennial series of reports to Congress, as mandated in the Water Resources Development Act of 1992. The first report to Congress, including the data summary (Appendix A) and evaluation protocols (Chapter 2, Appendices B-G), is available at the Internet address above. Data files are

currently available on CD-ROM through BASINS, and will be available on-line and via separate CD-ROM in the near future. Contact: 260-3845.

The National Wetlands Inventory (NWI), USDOI- Fish and Wildlife Service (FWS)
[http://www.nwi.fws.gov/Welcome.html]
The NWI produces information on the characteristics, extent, and status of the Nation's wetlands and deep water habitats. The NWI produces status and trend reports and related publications. Digitized Wetlands Data is available and can be integrated with other layers of the National Spatial Data Infrastructure. Contact 703-358-2161.

Reach File 3, EPA
[http://www.epa.gov/OWOW/NPS/rf/refs.html]
Reach indexing is a process of linking electronically or goereferencing state/interstate/tribal water quality information to the EPA Reach File for mapping and spatial analysis. In 1998, the latest version on the Reach File - RF3 (at 1:100,000 scale) - will become part of the federal National Hydrography Dataset (NHD). Contact 202-260-7046.

Rivers of Life: Critical Watersheds for Protecting Freshwater Biodiversity, The Nature Conservancy (TNC)
This recent report by TNC provides the first nationwide analysis of vulnerable fish and mussel species at the level of small watersheds (USGS cataloging units), a scale practical for conservation planning. Documenting "hot spots" for aquatic species, the report identifies 327 watersheds that together would protect populations of at-risk freshwater fish and mussels. The report available through the Conservancy's Web site at [www.consci.tnc.org/library/].

Toxic Substances Hydrology Program, USGS
[http://toxics.usgs.gov/toxics]
In 1982 the USGS initiated the Toxic Substances Hydrology (Toxics) Program. Its goal is to provide unbiased earth science information on the behavior of toxic substances in the Nation's hydrologic environment. The information is used to avoid human exposure, to develop effective cleanup strategies, and to prevent further contamination. This site provides access to local and regional sites and focuses on water contamination as the result of pesticides, metals, landfills, sewage, organic chemicals, oil, etc. It includes an overview of the scientific methods used by the Toxics Program including computer simulation and field and laboratory methods, and links to the AML Initiative.

Water Resources of the United States, USGS
[http://h2o.usgs.gov/]
The Hydrologic Benchmark Network (HBN) and the National Stream Quality Accounting Network (NASQAN) were established by the USGS to provide national and regional descriptions of stream water quality conditions and trends based on uniform

monitoring of selected watersheds throughout the United States, and to improve our understanding of the effects of the natural environment and human activities on water quality.

Sources for Local Programs and Encouraging Community Involvement

Farm*A*Syst
[http://www.wisc.edu/farmasyst/]
Farm*A*Syst/Home*A*Syst (Farm*A*Syst) national office and state programs have developed assessment materials and designed approaches to deliver these materials to farmers, ranchers, and homeowners. Farm*A*Syst's action-oriented approach is based on self-assessments leading to voluntary actions to prevent pollution. Easy-to-use worksheets provide a simple and inexpensive way for individual landowners to evaluate pollution risks on their property and serve as an essential first step in developing plans to prevent pollution. The national Farm*A*Syst office is jointly funded by EPA and USDA's Cooperative State Research Education and Extension Service (CSREES) and NRCS. National Farm*A*Syst Office (608) 262-0024.

National Estuary Program, EPA
[http://www.epa.gov/owow/estuaries/about2.htm]
This website will link you to the 28 national estuary programs (NEPs) which have been established under section 320 of the Clean Water Act to identify, restore and protect estuaries of national significance. Unlike traditional regulatory approaches to environmental protection, the NEP targets a broad range of issues and engages local communities in the process. The program focuses not just on improving water quality in an estuary, but on maintaining the integrity of the whole system -- its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values. Each NEP characterizes the condition of the estuarine health, identifies the problems which threaten the productivity and sustainability of the estuarine resources, and sets priorities and obtains financial commitments from federal, state and local agencies and other implementing organizations for addressing the problems. This information is used to develop Comprehensive Conservation and Management Plans for each NEP. Contact 202-260-6502.

Surf Your Watershed, EPA
[http://www.epa.gov/surf/]
Surf Your Watershed is an Internet-based service to help you locate, use, and share diverse environmental data about aquatic system health in each 8-digit watershed. This site provides environmental hotlinks for your specific watershed area and links to the National Watershed Network, Conservation Technology Information Center calendar and the Index of Watershed Indicators. Contact 202-260-7046.

State Specific Sources of Information

Priority areas and concerns identified through Locally Led Conservation and State Technical Committees, NRCS - Farm Service Agency (FSA)
Priority areas and natural resource concerns are identified through a locally led conservation process across the nation. Conservation districts convene a local work group comprised of the district board members and key staff, Natural Resources Conservation Service (NRCS) staff, Farm Service Agency (FSA) county committees and key staffs, Cooperative State Research, Education, and Extension Service and other Federal, State, and local agencies interested in natural resource conservation. The conservation districts bring views of local interests to work groups by gathering community input through the locally led conservation process. In general, priority areas are defined as watersheds, regions, or areas of special environmental sensitivity or having significant soil, water, or related natural resource concerns. The local work group identifies program priorities by completing a natural resource needs assessment and, based on that assessment, develops proposals for priority areas. For information contact your local USDA Service Center or State NRCS Office.

State and tribal water quality monitoring data and reports under the Clean Water Act (CWA) Section 305(b), EPA
[http://www.epa.gov/305b/]
The information presented at this site is from the individual states', tribes' or other jurisdiction's, 305(b) reports, which are submitted biennially to EPA. The National Water Quality Inventory prepared by EPA as a report to Congress is a summary document presenting those data that are reported similarly by all jurisdictions. Each state or other jurisdiction's report contains more detailed information than is presented here, in particular, extensive tables listing by name individual river or stream segments, lakes, estuaries, etc., with data on their assessed water quality as compared to standards and criteria. For detailed information on water quality in particular water bodies as reported in state 305(b) reports, it is important to go directly to state or local sources of data, by requesting technical help from the agency contacts listed at this site for each reporting agency. Contact 202-260-7046.

BASINS (Better Assessment Science Integrating Point and Nonpoint Sources), EPA
[http://www.epa.gov/OST/BASINS]
The EPA water programs and their counterparts in states and pollution control agencies are increasingly emphasizing watershed- and water-quality-based assessment and integrated analysis of point and nonpoint sources. Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) is a system developed to meet the needs of such agencies. It integrates a geographic information system (GIS), national watershed data, and state-of-the-art environmental assessment and modeling tools into one convenient package.

BASINS addresses three objectives: (1) to facilitate examination of environmental information; (2) to provide an integrated watershed and modeling framework; and (3) to support analysis of point and nonpoint source management alternatives.

BASINS is a tool that supports the development of total maximum daily loads (TMDLs), which require a watershed-based approach integrating both point and nonpoint sources for a variety of pollutants and at a variety of scales, using tools that range from simple to sophisticated.

BASINS overcomes the lack of integration, limited coordination, and time-intensive execution typical of more traditional assessment tools. BASINS makes watershed and water quality studies easier by bringing key data and analytical components together "under one roof." Contact 202-260-1330.

BEACH Watch, EPA
[http://www.epa.gov/OST/beaches]
BEACH Watch is the Internet home page for the EPA's new Beaches Environmental Assessment, Closure, and Health (BEACH) Program. This website will become the national information center for up-to-date information on beach health protection activities throughout the United States.

Information that can currently be found at this site includes:

- BEACH Program Overview
- Beach goers' Guide
- National Beach Health Survey information--status and current information for beaches along the U.S. coast and Great Lakes. The voluntary survey collected information on beach health activities including: water quality standards, monitoring, advisory and closure practices, costs, governmental responsibilities, and extensive beach-specific information. In fiscal year 1999, the survey will be expanded to include inland waters and the Agency will geolocate the beach information.
- Links via the Internet to various sources of information. These include:
  - Reports on beach water quality, such as EPA's report titled "Summary of U.S. Great Lakes Beach Closings 1981-1994" and the NRDC's "Testing the Waters, 1997."
  - Local Beach Information: beach conditions, local beach weather, a list of contacts for more information on local beach water quality.

Contact: 202-260-0642.

The National Listing of Fish and Wildlife Consumption Advisories, EPA
[http://www.epa.gov/OST/fish]
The Listing summarizes information on fish consumption advisories issued by States, Federal Agencies, Native American Tribes and local governments. These advisories are

Water Quality Assessment Guidance

Ecosystem Analysis at the Watershed Scale, a Federal Guide for Watershed Analysis. USDA-USFS
This is an analysis of the procedures used to characterize the human, aquatic, riparian and terrestrial features, conditions, processes and interactions within a watershed. Contact 503-808-2176.

Guidance for Ecological Risk Assessment, EPA
[http://www.epa.gov/ncea/ecorsk.htm]
The Guidelines are internal guidance for EPA and to inform the public and the regulated community regarding the Agency's approach to ecological risk assessment. The Guidelines emphasize that the interface between risk assessors, risk managers, and interested parties is critical for ensuring that the results of the assessment can be used to support a management decision. The guidelines discuss the various phases of ecological risk assessment: problem formulation, risk analysis and risk characterization. Guidance for place-based or watershed scale risk assessments are provided throughout the report. A sample watershed conceptual model is a useful tool for understanding the interactions within a watershed to help make predictions about the value of restoration strategy options.

Interagency Protocols for Hydrologic Condition Assessments
[Web site due in summer 1998]
This framework for analyzing the hydrologic conditions of watersheds leads to the identification of the essential factors (water quality, quantity, and timing) affecting a watershed. (In print)

Section 106 Guidance for Water Quality Monitoring, EPA
The guidance provides the framework for state and tribal monitoring programs who receive Clean Water Act section 106 grant funds. The guidance is a tool to revitalize monitoring programs and report on core information in a comparable fashion. The guidance focuses on monitoring more of our waters more cost-effectively; providing greater comparability in monitoring parameters and methods in order to aggregate the information into various geographic scales. The guidance provides common indicators to report upon to measure progress toward meeting water quality goals. Contact 202-260-7046.

State Source Water Assessment and Protection Programs Final Guidance, EPA
[http://www.epa.gov/OGWDW/swp/swappg.html]
This Guidance is for conducting state source water assessments to protect supplies of drinking water. Contact 1-800-426-4791.

developed for the purpose of reducing health risks associated with the consumption of chemically contaminated fish and shellfish. The primary objective of the Listing is to summarize information on locations and content of fish and wildlife consumption advisories. Information is provided on points of contact for each of the listed advisories, chemicals causing advisories, species under advisory, geographic locational coordinates, types of water bodies affected, percent of water bodies assessed, the percentage of surface waters under advisory, and percentages of waters assessed for contamination. The Listing is available on diskette or by downloading the program from the Internet address indicated above. Beginning during the summer of 1998, the Listing will be available for "online" use via the EPA home page. Contact: 202-260-1305.

State lists of impaired waters under CWA Section 303(d), EPA
[http://www.epa.gov/OWOW/tmdl/index.html]
These are waters that are identified by states as not "fishable, swimmable" and states are required to develop "Total Maximum Daily Loads" for them. 1998 state lists are in review, and 1996 lists are on hard copy. The creation of a tracking system to put individual lists into a database is in progress, however this project remains at the "alpha stage". Contact 202-260-7074.

State Soil Geographic Database (STATSGO), NRCS
[http://www.ftw.nrcs.usda.gov/stat_data.html]
This site provides interactive and form-based download of STATSGO data for analyses. Soil maps for the State Soil Geographic (STATSGO) database are made by generalizing detailed soil survey data. The mapping scale for STATSGO map is 1:250,000 (with the exception of Alaska, which is 1:1,000,000). The level of mapping is for broad planning and management uses covering state, regional, and multi-state areas. STATSGO data are available for the conterminous U.S., Alaska, Hawaii, and Puerto Rico. Data is also available by CD-ROM for $50 either through the website, by E-mail to webmaster@ftw.nrcs.usda.gov, or by calling 1-800-672-5559.

State Wellhead Protection Programs, EPA
[http://www.epa.gov/OGWDW/wellhead.html]
These are a potential source of local assessment data on ground water quality and targeting high risk areas. Depending on the state there may be maps, analysis of hydrologic flow and data on contaminant events and potential risks. A contact list for State Wellhead Protection Program coordinators is located on the on the above referenced Website. Contact 202-260-2399.

Available this summer will be a summary of data sources useful to drinking water source assessment efforts. It will include links to national databases that contain water quality assessment data and mapped information on potential water contaminant sources, as well as water quality monitoring programs. It will be located on the EPA website: [http://www.epa.gov/OGWDW/swapnp.html] Contact 202-260-2399.

Water Restoration on Private Lands

Small Watershed Program Assessment and Inventory Reports, NRCS
(Located under Watershed and River Basin Planning and Installation Public Law 83-566 (PL566))
[http://www.ftw.nrcs.usda.gov/pl566/pl566.html]
Technical and financial assistance is provided in cooperation with local sponsoring organizations, state, and other public agencies to voluntarily plan and install watershed-based projects on private lands. The program empowers local people as decision-makers, builds partnerships and requires local and state funding contributions. This site includes maps showing the location of the PL83-566 Watershed Projects that are currently being installed and details for the sites in each region.

State of the Land, NRCS
[http://www.nhq.nrcs.usda.gov/land]
[http://www.nhq.nrcs.usda.gov/land/home.html]
This site provides data on land use and change, soil erosion and soil quality, water quality, wetlands, and other issues regarding the conservation and use of natural resources on nonfederal land in the United States. This site examines the issues involving agriculture and the environment, and examines the role private landowners play in maintaining water quality and watershed health. This site provides information on agricultural sources of water degradation and offers solutions. Maps, charts, tables and analysis are provided. Contact 202-720-8644.